



0000198875

MEMORANDUMRECEIVED
AZ CORP COMMISSION
DOCKET CONTROL2019 JUL -2 P 2: 28
Arizona Corporation Commission

DOCKETED

JUL -2 2019

DOCKETED BY

TO: Docket Control

FROM: Elijah O. Abinah
Director
Utilities Division

DATE: July 2, 2019

RE: IN THE MATTER OF POSSIBLE MODIFICATIONS TO THE ARIZONA CORPORATION COMMISSION'S ENERGY RULES (DOCKET NO. RU-00000A-18-0284)

SUBJECT: STAFF'S SECOND REVISED PROPOSED DRAFT RULES FOR THE POSSIBLE MODIFICATIONS TO THE ARIZONA CORPORATION COMMISSION'S ENERGY RULES

On April 29, 2019, Staff hosted a second Stakeholder Meeting to discuss possible modifications to the Commission's Energy Rules at the Commission's Phoenix office. Following these meeting, written Comments were received from interested parties and Staff is now proposing a second revised draft of the Modifications. A third stakeholder meeting will be held on July 30, 2019, also in the Phoenix offices of the Commission.

Attached is Appendix A for review and discussion is Staff's second revised draft of possible modifications to the Arizona Corporation Commission's Energy Rules. Major changes to the draft include:

- The following definitions have been added:
 - Approval;
 - Baseline;
 - Distributed Generation;
 - Distributed Renewable Storage Requirement;
 - Energy Efficiency ("EE") Resources; and
 - Renewable Distributed Generation.
- The Articles have been rearranged, with the Article containing Renewable Energy Resources and Clean Energy Resources being split up.
- The applicable resources have been updated, including EE being classified as a Clean Resource.
- The Renewable Energy Goal is set at 45 percent by 2035.

- The Clean Peak Goal is set at 20 percent by 2035.
- A Distributed Renewable Storage Requirement is set at 10 percent by 2035.
- An Electric Utility shall offer Performance Based Incentives for Energy Storage Systems, with specific caps.
- EE is applicable to Electric and Gas Utilities.

Staff has attached, as Appendix B, a summary of the written comments filed by interested parties in Docket No. RU-00000A-18-0284 from the April 29, 2019 until May 30, 2019.

EAO:PCL:elr/MAS

Originator: Patrick LaMere

Attachments

TITLE 14. PUBLIC SERVICE CORPORATIONS; CORPORATIONS AND ASSOCIATIONS; SECURITIES REGULATION

CHAPTER 2. CORPORATION COMMISSION

FIXED UTILITIES

ARTICLE 27. ENERGY RULES

Section

R14-2-2701. Definitions

R14-2-2702. Applicability

R14-2-2703. Renewable Energy Resources

R14-2-2704. Clean Energy Resources

R14-2-2705. Energy Implementation Plan

R14-2-2706. Load-Serving Entity's Integrated Resource Plan

R14-2-2707. Load-Serving Entity's Filing Requirements

R14-2-2708. Energy Efficiency Report

R14-2-2709. Commission Review, Acknowledgement and Approval

R14-2-2710. Resource Procurement

R14-2-2711. Independent Monitor Selection and Responsibilities

R14-2-2712. Waivers and Exemptions

R14-2-2713. Cooperatives

R14-2-2714. Commission Enforcement

R14-2-2715. Cost Recovery and Prudence

ARTICLE 27. ENERGY RULES

R14-2-2701. Definitions

In this Article, unless otherwise specified:

1. "Acknowledgement" means a Commission determination that a load-serving entity's IRP meets the reporting requirements of this Article under R14-2-2709(D).
2. "Action Plan" means a plan under R14-2-2706(G).
3. "Affected Utility" means a public service corporation under Arizona Constitution, Article 15, § 2.
4. "Affiliated" means related through ownership of voting securities, through contract, or otherwise in such a manner that one entity directly or indirectly controls another, is directly or indirectly controlled by another, or is under direct or indirect common control with another entity.
5. "Approval" means Commission authorization for implementation of a load-serving entity's Action Plan, including resource procurement, under R14-2-2709(D). A Commission determination of approval does not constitute a finding that the load-serving entity is entitled to recover the total costs of its Action Plan in a rate case proceeding.
6. "Baseline" means the percentage of existing clean energy resources delivering energy during the monthly coincident peak as of the effective date of these Rules.
7. "Benchmark" means to calibrate against a known set of values or standards.
8. "BTU" means British thermal unit.
9. "Capacity" means the nameplate rating of a generating facility.
10. "Capital costs" means the construction and installation cost of facilities, including land, land rights, structures, and equipment.
11. "Clean Energy Resource" means an energy resource that operates with zero net emissions beyond that of steam in accordance with R14-2-2704.
12. "Clean Peak Goal" means the percentage of retail energy sales during monthly coincident peak demand that an Affected Utility must derive from Clean Energy Resources.
13. "Coincident peak" means the maximum system demand at a particular point in time that occurs in the same demand interval, established on an annual, monthly, daily or hourly basis.
14. "Commission" means the Arizona Corporation Commission.
15. "Cooperative" means an Affected Utility that provides electric or gas service to retail customers and is:

- a. Not operated for profit;
 - b. Owned and controlled by its members; and
 - c. Operating as a public service company in Arizona.
16. "Cost-effective" means that total incremental benefits from a DSM measure exceed total incremental costs over the life of the DSM measure.
17. "Customer" means the person or entity in whose name service is rendered to a single contiguous field, location, or facility.
18. "Customer Class" means a subset of customers categorized according to similar characteristics, such as amount of energy consumed; amount of demand placed on the energy supply system at the system peak; hourly, daily, or seasonal load pattern; primary type of activity engaged in by the customer, including residential, commercial, industrial, agricultural, and governmental; and location.
19. "Decommissioning" means the process of safely and economically removing a generating unit from service.
20. "Demand-Side Management" or "DSM" means the beneficial reduction in the total cost of meeting energy service needs by reducing or shifting in time energy usage.
21. "Demand Response" means modification of customers' energy consumption patterns, affecting the timing or quantity of customer demand and usage, achieved through intentional actions taken by an affected utility or customer because of changes in prices, market conditions, or threats to system reliability.
22. "DSM Measure" means any material, device, technology, educational program, pricing option, practice, or facility alteration designed to result in reduced peak demand, increased energy efficiency, or shifting of energy consumption to off-peak periods.
23. "DSM Program" means one or more DSM measures provided as part of a single offering to customers.
24. "Derating" means a reduction in a generating unit's capacity.
25. "Discount Rate" means the interest rate used to calculate the present value of a cost.
26. "Distributed Generation" means any type of Customer-owned electrical generator, including all inverter(s) and protective, safety, and associated equipment necessary to produce electric power

that is located on the distribution system, any subsystem of the distribution system, or behind the Customer meter.

27. “Distributed Renewable Storage Requirement” means the kWh of gross energy generated from a Renewable Distributed Generation facility paired with an Energy Storage System.
28. “Efficiency Resources” means any DSM Measure, DSM Program or demand response-based technology offered by an Affected Utility that results in a change of a Customer’s normal energy consumption pattern.
29. “Electric Utility” means a public service corporation under Arizona Constitution, Article 15, § 2, providing electric service to the public.
30. “Emergency” means an unforeseen and unforeseeable condition that:
- a. Does not arise from an Affected Utility’s failure to engage in good utility practices,
 - b. Is temporary in nature, and
 - c. Threatens reliability or poses another significant risk to the system.
31. “End Use” means the final application of electric energy, for activities such as, but not limited to, heating, cooling, running an appliance or motor, an industrial process, or lighting.
32. “Energy Efficiency” means the production or delivery of an equivalent level and quality of end-use electric or gas service using less energy, or the conservation of energy by end-use customers.
33. “Energy Storage Goal” means the amount of energy an Affected Utility must procure from Energy Storage Systems.
34. “Energy Storage System” means equipment that receives electrical energy and provides a means to store that energy for later use.
35. “Environmental Benefits” means avoidance of costs for compliance, or reduction in environmental impacts, for things including, but not limited to:
- a. Water use and water contamination,
 - b. Monitoring storage and disposal of solid waste,
 - c. Health effects from burning fossil fuels, and
 - d. Emissions from production of fuels and energy.
36. “Energy losses” means the quantity of electric energy generated or purchased that is not available for sale to end users, for resale, or for use by an Affected Utility.
37. “Gas” means either natural gas or propane.

38. "Gas Utility" means a public service corporation under Arizona Constitution, Article 15, § 2, providing gas services to the public.
39. "Generating unit" means a specific device or set of devices that converts one form of energy into electric energy.
40. "Good Utility Practice" means any of the practices, methods, and acts that, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with reliability, safety, and efficiency. Good Utility Practice is not intended to be limited to the optimal practice, method, or act to the exclusion of all others, but rather to include practices, methods, or acts generally accepted in the region at the relevant time.
41. "Heat rate" means a measure of generating station thermal efficiency expressed in Btu per net kWh and computed by dividing the total Btu content of fuel used for electric generation by the total kWh of energy generated.
42. "Incremental benefits" means amounts saved through avoiding costs for fuel, purchased power, new capacity, transmission, distribution, and other cost items necessary to provide electric or gas utility service, along with other improvements in societal welfare, such as avoided environmental impacts, including, but not limited to, water consumption savings, air emission reduction, reduction in coal ash, and reduction of nuclear waste.
43. "Incremental costs" means the additional expenses of a DSM measure, relative to the level of energy or gas demand, energy or gas consumption, and associated expenses estimated to occur in the absence of a specific DSM program.
44. "Independent Monitor" means an entity that is not affiliated with a load-serving entity and that is selected to oversee the conduct of a competitive procurement process in accordance with R14-2-2708.
45. "Integrated Resource Plan" or "IRP" means a load-serving entity's 15-year resource plan to meet forecasted annual peak and energy demand through a combination of supply-side and demand-side resources in accordance with this Article.
46. "Integration" means methods by which energy produced can be incorporated into the electric grid.
47. "Interruptible power" means power made available under an agreement that permits curtailment or cessation of delivery by the supplier.

48. "In-service date" means the date a power supply source becomes available for use by a load-serving entity.
49. "Kilowatt-hour" or "kWh" means the electric energy equivalent to the amount of electric energy delivered in one hour when delivery is at a constant rate of one kilowatt.
50. "Limited-income customer" means a customer with below average level of household income, as defined by the Federal Poverty Guidelines, through the U.S. Department of Health & Human Services, Office of the Assistant Secretary for Planning and Evaluation. An Affected Utility may propose additional requirements in its Commission-approved DSM program description.
51. "Load management" means actions taken or sponsored by an affected utility to reduce peak demands or improve system operating efficiency, such as direct control of customer demands through affected-utility-initiated interruption or cycling, thermal storage, or educational campaigns to encourage customers to shift loads.
52. "Load-serving entity" means an Affected Utility that provides energy generation service and operates or owns, in whole or in part, a generating facility or facilities with capacity of at least 50 megawatts combined.
53. "Maintenance" means the repair of generation, transmission, distribution, administrative, and general facilities; replacement of minor items; and installation of materials to preserve the efficiency and working condition of facilities.
54. "Mothballing" means to classify a generating unit as unavailable for service but can be brought back into service.
55. "Operate" means to manage or otherwise be responsible for the production of energy by a generating facility, whether that facility is owned by the operator, in whole or in part, or by another entity.
56. "Probabilistic analysis" means a systematic evaluation of the effect, on costs, reliability, or other measures of performance, of possible events affecting factors that influence performance, considering the likelihood that the events will occur.
57. "Production cost" means the variable operating costs and maintenance costs of producing energy through generation plus the cost of purchases of power sufficient to meet demand.
58. "Refurbish" means to make major changes, more extensive than maintenance or repair, in the power production, transmission, or distribution characteristics of a component of the power supply

system, such as by changing the fuels that can be used in a generating unit or changing the capacity of a generating unit.

59. “Reliability” means a measure of the ability of a load-serving entity’s generation, transmission, or distribution system to provide power without failures to reflect the portion of time that a system is unable to meet demand or the kilowatt-hours of demand that could not be supplied.
60. “Renewable Distributed Generation” means a Distributed Generation facility using Renewable Energy Resource[s] for the generation of energy.
61. “Renewable Energy Goal” means the portion of an Affected Utility’s annual retail energy sales that are derived from Renewable Energy Resources.
62. “Renewable Energy Resource” means an energy resource that is replaced rapidly by a natural, ongoing process in accordance with R14-2-2703.
63. “Reserve requirements” means the capacity that a load-serving entity must maintain in excess of its peak load to provide for scheduled maintenance, forced outages, unforeseen loads, emergencies, system operating requirements, and any agreement between two or more load-serving entities to provide backup capacity.
64. “RFP” means request for proposal.
65. “Sensitivity analysis” means a systematic assessment of the degree of response of costs, reliability, or other measures of performance to changes in assumptions about factors that influence performance.
66. “Spinning reserve” means the capacity a load-serving entity must maintain connected to the system and ready to deliver power promptly in the event of an unexpected loss of generation source, expressed as a percentage of peak load, a percentage of the largest generating unit, or in fixed megawatts.
67. “Staff” means individuals working for the Commission, whether as employees or through contract.
68. “Total cost” means all capital, operating, maintenance, fuel, and decommissioning costs, plus the costs associated with mitigating any adverse environmental effects, incurred by an end user, an Affected Utility, or the public, in the provision or conservation of electric energy.

R14-2-2702. Applicability

These Rules apply to each Affected Utility, providing electric or gas service to retail customers.

R14-2-2703. Renewable Energy Resources

A. Renewable Energy Resources are applications of the following defined technologies:

1. “Biogas Electric Generator” is a generator that produces energy from gases that are derived from plant-derived organic matter, agricultural food and feed matter, wood wastes, aquatic plants, animal wastes, vegetative wastes, or wastewater treatment facilities using anaerobic digestion or from municipal solid waste through a digester process, an oxidation process, or other gasification process;
2. “Biopower Electric Generator” is a generator that uses any raw or processed plant-derived organic matter available on a renewable basis, including: agricultural food and feed crops; agricultural crop wastes and residues; wood wastes and residues, including landscape waste, right-of-way tree trimmings, or small diameter forest thinnings that are 12” in diameter or less; dead and downed forest products; aquatic plants; animal wastes; other vegetative waste materials; non-hazardous plant matter waste material that is segregated from other waste; forest-related resources, such as harvesting and mill residue, pre-commercial thinnings, slash, and brush; miscellaneous waste, such as waste pellets, crates, and dunnage; and recycled paper fibers that are no longer suitable for recycled paper production;
3. “Geothermal Generator” is an energy generator that uses heat from within the earth’s surface to produce energy;
4. “Hydropower Facility” is a generator that is:
 - a. A low-head, micro hydro run-of-the-river system that does not require any new damming of the flow of the stream;
 - b. An existing dam that adds power generation equipment without requiring a new dam, diversion structures, or a change in water flow that will adversely impact fish, wildlife, or water quality;
 - or
 - c. Generation using canals or other irrigation systems;
5. “Hybrid Wind and Solar Electric Generator” is a system in which a wind generator and a solar electric generator are combined to provide energy;
6. “Landfill Gas Generator” is an energy generator that uses methane gas obtained from landfills to produce energy;

7. “Solar Energy Resources” use sunlight or solar heat to produce energy by either photovoltaic devices or solar thermal electric devices; and
8. “Wind Generator” is a mechanical device that is driven by wind to produce energy;
9. Renewable Distributed Generation technologies including:
 - a. “Commercial Solar Pool Heaters” are devices that use solar energy to heat commercial or municipal swimming pools;
 - b. “Distributed Solar Electric Generator” means electric generation sited at a customer premises, providing electric energy from solar electric resources to the customer load on that site or providing wholesale capacity and energy to the local Utility Distribution Company for use by multiple customers in contiguous distribution substation service areas;
 - c. “Geothermal Space Heating and Process Heating System” is a system that uses heat from within the earth’s surface for space heating or for process heating;
 - d. “Renewable Combined Heat and Power System” is a system that produces both energy and useful renewable process heat;
 - e. “Solar Daylighting” is the application of a device specifically designed to capture and redirect the visible portion of the solar beam, while controlling the infrared portion, for use in illuminating interior building spaces in lieu of artificial lighting.
 - f. “Solar Heating, Ventilation, and Air Conditioning” or “HVAC” is the combination of Solar Space Cooling and Solar Space Heating as part of one system.
 - g. “Solar Industrial Process Heating and Cooling” is the use of solar thermal energy for industrial or commercial manufacturing or processing applications.
 - h. “Solar Space Cooling” is a technology that uses solar thermal energy absent the generation of energy to drive a refrigeration machine that provides for space cooling in a building.
 - i. “Solar Space Heating” is a method whereby a mechanical system is used to collect solar energy to provide space heating for buildings; or
 - j. “Solar Water Heater” is a device that uses solar energy to heat water for residential, commercial, or industrial purposes;
10. An Energy Storage System that is directly charged by a Renewable Distributed Generation facility.

B. The Commission may consider the implementation of additional technologies as Renewable Energy Resources. Energy conservation products, energy management products, energy efficiency products, or products that use non-renewable fuels shall not be considered as Renewable Energy Resources.

R14-2-2704. Clean Energy Resources

A. Clean Energy Resources are applications of the following:

1. Renewable Energy Resources in accordance with R14-2-2703.
2. Efficiency Resources in accordance with R14-2-2708.
3. Nuclear Power Generators located in Arizona that produce energy using nuclear fusion or fission, including, without limitation, pressurized water reactors, small modular reactors, molten salt reactors, liquid metal reactors, magnetic confinement reactors, inertial confinement reactors, and other reactor types, as approved by the United States Nuclear Regulatory Commission.

B. The Commission may consider the implementation of additional technologies as Clean Energy Resources.

R14-2-2705. Energy Implementation Plan

A. An Electric Utility shall, by April 1 every third year, file with Docket Control an Energy Implementation Plan which describes how the Affected Utility will comply with this Article.

B. An Electric Utility shall include in its Energy Implementation Plan the following:

1. An Electric Utility shall plan to achieve a Renewable Energy Goal of at least 45% of its retail kWh sales to be derived from Renewable Energy Resources by 2035.
2. An Electric Utility shall plan to achieve a Clean Peak Goal, above the baseline, which requires at least 20% of its retail kWh sales during the time of monthly coincident peak demand to be derived from Clean Energy Resources by 2035.

C. In meeting the requirements under subsection (B), an Electric Utility shall plan to achieve a Renewable Energy Goal with a 10% Distributed Renewable Storage Requirement by 2035.

D. An Electric Utility shall include in its Energy Implementation Plan under subsection (B) the following information:

1. For the previous three calendar years:
 - a. Total kWh of energy or equivalent obtained from Clean Energy Resources and Renewable Energy Resources, disaggregated by technology type;
 - b. Total kW of generation capacity, disaggregated by technology type;

- c. Total Costs regarding cents per actual kWh of energy obtained from Clean Energy Resources and cents per kW of generation capacity, disaggregated by technology type; and
 - d. A description of the Electric Utility's competitive procedures for choosing Clean Energy Resources and a certification from an independent auditor, approved by the Commission, that those competitive procedures are fair and unbiased and have been appropriately applied;
- 2. For the following three calendar years:
 - a. A Renewable Energy Goal; and
 - b. A description of the Renewable Energy Resources and Clean Energy Resources, identified by technology, proposed to be added each year for the calendar years and a description of the kW and kWh to be obtained from each of those resources and:
 - i. The estimated Total Cost of each Renewable Energy Resource proposed to be added per kWh and per year;
 - ii. The estimated Total Cost of each Clean Energy Resource proposed to be added per kWh and per year;
 - iii. A description of the method by which each Renewable Energy Resource is to be obtained, such as self-build, customer installation, or request for proposals; and
 - iv. A description of the method by which each Clean Energy Resource is to be obtained, such as self-build, customer installation, or request for proposals;
- 3. A description of the plan to achieve a Clean Peak Goal under subsection (B)(2) including:
 - a. For the previous three calendar years:
 - i. Monthly coincident peak demand and energy consumption disaggregated by customer class; and
 - ii. The kWh sold from Clean Energy Resources during the Electric Utility's monthly coincident peak demand disaggregated by Clean Energy Resource and Customer Class; and
 - b. For the following three calendar years:
 - i. A Clean Peak Goal; and
 - ii. Projected monthly coincident peak demand disaggregated by Customer Class; and

4. For an Electric Utility which uses Efficiency Resources towards meeting its requirements under subsection (B), the Electric Utility shall include in its Energy Implementation Plan an Energy Efficiency Report in accordance with R14-2-2708.

E. An Electric Utility may demonstrate in its Energy Implementation Plan the delivery of energy from Clean Energy Resources and Renewable Energy Resources to their Customers by providing necessary proof including:

1. The transmission rights to deliver energy from Clean Energy Resources or Renewable Energy Resources to the Affected Utility's system, if applicable;
2. A control area operator scheduling the energy from Clean Energy Resources or Renewable Energy Resources for delivery to the Affected Utility's system, if applicable; and
3. For an Energy Storage System under subsection (B)(1), that a Distributed Renewable Generation facility is being used to charge the Energy Storage System.

F. An Electric Utility shall, in its Energy Implementation Plan, provide a Customer a performance-based incentive for each stand-alone Energy Storage System or an Energy Storage System paired with a Distributed Generation facility installed on the Customer's premise after the effective date of these Rules according to the following:

1. For an Energy Storage System with a nameplate rating 20 kW and under, a performance-based incentive will be paid annually based on the recorded kWh of energy offset or discharged to the Electric Utility's distribution system for a period no less than five years; and
2. For an Energy Storage System with a nameplate rating above 20 kW, a performance-based incentive will be paid annually based on the recorded kWh of energy offset or discharged to the Electric Utility's distribution system for a period no greater than three years.

G. If an Electric Utility's submission of its Energy Implementation Plan does not contain sufficient information to allow Staff to analyze the submission fully for compliance with this Article, Staff shall request additional information from the Electric Utility, including the data used in the Electric Utility's analyses.

R14-2-2706. Load Serving Entity's Integrated Resource Plan

A. A load-serving entity shall, by April 1 every third year, file with Docket Control an IRP which describes how the load-serving entity will comply with this Article.

B. A load-serving entity shall include in its IRP a compilation of the following items of load data and analyses, which may include a reference to the last filing made under this subsection for each item for which there has been no change in forecast since the last filing:

1. 15-year forecast of system coincident peak load (megawatts) and energy consumption (megawatt-hours) by month and year, expressed separately for residential, commercial, industrial, and other customer classes; for interruptible power; for resale; and for energy losses;
2. Disaggregation of the load forecast into a component in which no additional demand management measures are assumed, and a component assuming the change in load due to additional forecasted demand management measures; and
3. Documentation of all sources of data, analyses, methods, and assumptions used in making the load forecasts, including a description of how the forecasts were benchmarked and justifications for selecting the methods and assumptions used.

C. A load-serving entity shall include in its IRP the following prospective analyses and plans, which shall compare a wide range of resource options and take into consideration expected duty cycles, cost projections, other analyses required under this Section, environmental impacts, and water consumption and may include a reference to the last filing made under this subsection for each item for which there has been no change since the last filing:

1. For each year:
 - a. Projected data for each of the items listed under R14-2-2706(B)(1), for each generating unit and purchased power source, including each generating unit that is expected to be new or refurbished during the period, which shall be designated as new or refurbished, as applicable, for the year of purchase or the period of refurbishment;
 - b. Projected data for each of the items listed in subsection R14-2-2706(B)(2), for the power supply system;
 - c. The capital cost, construction time, and construction spending schedule for each generating unit expected to be new or refurbished during the period;
 - d. For each generating unit and purchased power source, the change in costs for operation and maintenance, environmental compliance, system integration, backup capacity, and transmission delivery;

- e. If discontinuation, decommissioning, or mothballing of any power source or permanent derating of any generating facility is expected:
 - i. Identification of each power source or generating unit involved;
 - ii. The costs and spending schedule for each discontinuation, decommissioning, mothballing, or derating; and
 - iii. The reasons for each discontinuation, decommissioning, mothballing, or derating;
 - f. The Total Costs of all new or refurbished transmission and distribution facilities expected during the 15-year period;
 - g. An explanation of the need for and purpose of all expected new or refurbished transmission and distribution facilities, which explanation shall incorporate the load-serving entity's most recent transmission plan filed under A.R.S. § 40-360.02(A) and any relevant provisions of the Commission's most recent Biennial Transmission Assessment decision regarding the adequacy of transmission facilities in Arizona; and
 - h. Cost analyses and cost projections;
2. Documentation of the data, assumptions, and methods or models used to forecast production costs and power production for the IRP, including the method by which the forecast was benchmarked;
 3. A description of each potential power source that was rejected; the capital costs, operating costs, and maintenance costs of each rejected source; and an explanation of the reasons for rejecting each source;
 4. A 15-year forecast of Distributed Generation by customers of the load-serving entity, in terms of annual peak production (megawatts) and annual energy production (megawatt-hours);
 5. A 15-year forecast of Total Costs of Distributed Generation identified under (C)(4);
 6. Documentation of the analysis of Distributed Generation under subsections (C)(4) and (5);
 7. Consideration of a wide range of resources that promotes fuel and technology diversity within its portfolios;
 8. A calculation of the benefits of generation using Renewable Energy Resources;
 9. The delivered cost of all resource options, including costs associated with environmental compliance, system integration, backup capacity, and transmission delivery;
 10. Analysis of integration costs for electric power generation for which the energy production varies in response to naturally occurring processes like wind or solar intensity;

11. Analysis to increase the efficiency of the load-serving entity's generation using fossil fuel; and
12. Data to support technology choices for supply-side resources.

D. A load-serving entity shall include in its IRP a compilation of the following prospective analyses and plans:

1. Analyses to identify and assess errors, risks, and uncertainties in the following, completed using methods such as sensitivity analysis and probabilistic analysis:
 - a. Demand forecasts;
 - b. The costs of demand management measures and power supply;
 - c. The availability of sources of power;
 - d. The costs of compliance with existing and expected environmental regulations;
 - e. Any analysis by the load-serving entity in anticipation of potential new or enhanced environmental regulations;
 - f. Changes in fuel prices, and availability;
 - g. Construction costs, capital costs, and operating costs; and
 - h. Other factors the load-serving entity wishes to consider.
2. A description and analysis of available means for managing the errors, risks, and uncertainties identified and analyzed in subsection (D)(1), such as obtaining additional information, limiting risk exposure, using incentives, creating additional options, incorporating flexibility, and participating in regional generation and transmission projects; and
3. A plan to manage the errors, risks, and uncertainties identified and analyzed in subsection (D)(1).

E. A load-serving entity shall include in its IRP a selection of a portfolio of resources based upon comprehensive consideration of a wide range of supply- and demand-side options that shall:

1. Result in the load-serving entity's reliably serving the demand for electric energy services;
2. Address the adverse environmental impacts of power production;
3. Address water consumption impacts of power production; and
4. Effectively manage the uncertainty and risks associated with costs, environmental impacts, load forecasts, and other factors;
5. Achieve reasonable total costs exceeding three calendar years, taking into consideration the objectives set forth in subsections (E)(1) through (4); and
6. Contain all of the following:

- a. A complete description and documentation of the portfolio, including supply and demand conditions, availability of transmission, costs, and discount rates utilized;
- b. A comprehensive, self-explanatory load and resources table summarizing the portfolio;
- c. A brief executive summary;
- d. An index to indicate where the responses to each filing requirement of these rules can be found;
and
- e. A definition of the terms section for terms used in the IRP.

F. A load-serving entity shall include in its IRP a work plan that includes:

- 1. The load-serving entity's method for assessing potential resources;
- 2. The sources of the load-serving entity's current assumptions; and
- 3. An outline of the timing and extent of public participation and advisory group meetings the load-serving entity has engaged in while developing its IRP.

G. A load-serving entity shall include in its IRP an Action Plan, based on the results of the resource planning process that:

- 1. Includes a summary of actions to be taken on future resource acquisitions;
- 2. Includes details on resource types, resources capacity, resource costs and resource timing; and
- 3. Covers the three-year period following the Commission's order of the IRP.

H. A load-serving entity shall include in its IRP its Energy Implementation Plan in accordance with R14-2-2705.

I. Within 180 calendar days before a load-serving entity files its IRP, the load-serving entity shall file with Docket Control a preliminary IRP to include each portfolio of resources that will be analyzed by the load-serving entity in its IRP.

J. Within 60 calendar days following a load-serving entity filing its preliminary IRP, the load-serving entity shall host workshop(s) in coordination with the Commission, open to the general public, to discuss the preliminary IRP including the following:

- 1. Each portfolio of resources that will be analyzed by the load-serving entity;
- 2. The modeling assumptions, outputs, and methodologies used; and
- 3. Provide the general public an opportunity to review and provide input regarding the preliminary IRP.

- K. If a load-serving entity's IRP does not contain sufficient information to allow Staff to analyze the IRP fully for compliance with this Article, Staff shall request additional information from the load-serving entity, including the data used in the load-serving entity's analyses.
- L. Staff may request that a load-serving entity complete additional analyses to improve specified components of the load-serving entity's submissions.
- M. If a load-serving entity believes that a data-reporting requirement may result in disclosure of confidential business data or confidential energy infrastructure information, the load-serving entity may submit to Staff a request that the data be submitted to Staff under a confidentiality agreement, which request shall include an explanation justifying the confidential treatment of the data.
- N. Data protected by a confidentiality agreement shall not be submitted to the Commission and will not be open to public inspection or otherwise made public except upon an order of the Commission entered after written notice to the load-serving entity.

R14-2-2707. Load-Serving Entity Compliance Requirements

- A. A load-serving entity shall, by April 1 of each year, file with Docket Control a report that shall include the following items of demand-side data, including for each item for which no record is maintained the load-serving entity's best estimate and a full description of how the estimate was made:
1. Hourly demand for the previous calendar year, disaggregated by:
 - a. Sales to end users;
 - b. Sales for resale;
 - c. Energy losses; and
 - d. Other disposition of energy, such as energy furnished without charge and energy used by the load-serving entity.
 2. Coincident peak demand and energy consumption by month for the previous 10 years, disaggregated by customer class;
 3. Number of customers by customer class for each of the previous 10 years; and
 4. Reduction in load (kilowatt and kilowatt-hours) in the previous calendar year due to existing demand management measures, by type of demand management measure.
- B. A load-serving entity shall, by April 1 of each year, file with Docket Control a report that shall include the following items of supply-side data, including for each item for which no record is maintained the load-serving entity's best estimate and a full description of how the estimate was made:

1. For each generating unit and purchased power contract for the previous calendar year:
 - a. In-service date and the expected time period that a power supply source will be available for use by an Affected Utility or contract period;
 - b. Type of generating unit or contract;
 - c. The Affected Utility's share of the generating unit's capacity, or of capacity under the contract, in megawatts;
 - d. Maximum generating unit or contract capacity, by hour, day, or month, if such capacity varies during the year;
 - e. Annual capacity factor;
 - f. Average heat rate of generating units and, if available, heat rates at selected output levels;
 - g. Average fuel cost for generating units, in dollars per million Btu for each type of fuel;
 - h. Other variable operating and maintenance costs for generating units, in dollars per megawatt hour;
 - i. Purchased power energy costs for contracts exceeding three calendar years, in dollars per megawatt-hour;
 - j. Fixed operating and maintenance costs of generating units, in dollars per megawatt;
 - k. Demand charges for purchased power;
 - l. Fuel type for each generating unit;
 - m. Minimum capacity at which the generating unit would be run, or power must be purchased;
 - n. Whether, under standard operating procedures, the generating unit must be run if it is available to run;
 - o. Description of each generating unit as base load, intermediate, or peaking;
 - p. Environmental impacts, including air emission quantities (in metric tons or pounds) and rates (in quantities per megawatt-hour) for carbon dioxide, nitrogen oxides, sulfur dioxide, mercury, particulates, and other air emissions subject to current or expected future environmental regulation;
 - q. Water consumption quantities and rates; and
 - r. Tons of coal ash produced per generating unit.
2. For the power supply system for the previous calendar year:
 - a. A description of generating unit commitment procedures;

- b. Production cost;
 - c. Reserve requirements;
 - d. Spinning reserve;
 - e. Reliability of generating, transmission, and distribution systems;
 - f. Purchase and sale prices, averaged by month, for the aggregate of all purchases and sales related contracts less than three calendar years; and
 - g. Energy losses;
- 3. The total capacity of Distributed Generation in the load-serving entity's service area for the previous calendar year; and
 - 4. An explanation of any resource procurement processes used by the load-serving entity during the previous calendar year that did not include use of an RFP, including the exception under which the process was used.

R14-2-2708. Energy Efficiency Report

- A. An Electric Utility shall, in its Energy Implementation Plan, include an Energy Efficiency Report with a description of Efficiency Resources used towards its Energy Implementation Plan in accordance with R14-2-2705. If no Efficiency Resources are used, the Electric Utility shall include, in its Energy Implementation Plan, an explanation why no Efficiency Resources were used.
- B. A Gas Utility shall, by April 1 every third year, file with Docket Control an Energy Efficiency Report which describes how the Gas Utility will comply with this Article. If no Efficiency Resources are used, the Gas Utility shall file with Docket Control a letter of explanation why no Efficiency Resources were used.
- C. An Affected Utility shall include in its Energy Efficiency Report each of the Affected Utility's Efficiency Resources following information:
 - 1. A list of the Affected Utility's current DSM programs and DSM measures, organized by customer segment;
 - 2. Information for each DSM program or DSM measure including the following:
 - a. A brief description;
 - b. Goals, objectives, and savings targets;
 - c. The level of customer participation during the previous three calendar years;

- d. The total cost incurred during the previous three calendar years, disaggregated by type of cost, such as administrative costs, rebates, and monitoring costs;
- e. A description and the results of evaluation and monitoring activities during the previous three calendar years;
- f. Savings realized in an appropriate metric (kW, kWh, therms, and BTUs);
- g. The environmental benefits realized, including reduced emissions and water savings;
- h. Incremental benefits and net benefits, in dollars;
- i. Performance-incentive calculations for the previous three calendar years;
- j. Problems encountered during the previous three calendar years and proposed solutions;
- k. A description of any modifications proposed for the following three calendar years; and
- l. Whether the affected utility proposes to terminate the DSM program or DSM measure and the proposed date of termination.

- 3. A description of the findings from any research projects completed during the previous three calendar years; and

D. An Affected Utility shall design each DSM program:

- 1. To be cost-effective; and
- 2. To accomplish at least one of the following:
 - a. Provide energy efficiency;
 - b. Manage energy consumption;
 - c. Reduce peak demand; or
 - d. Alter customer energy consumption behavior.

E. An Affected Utility shall consider the following when planning and implementing a DSM program:

- 1. Whether the DSM program will achieve cost-effective energy savings and peak demand reductions;
- 2. Whether the DSM program will advance market transformation and achieve sustainable savings, reducing the need for future market interventions;
- 3. Whether the Affected Utility can ensure a level of funding adequate to sustain the DSM program and allow the DSM program to achieve its targeted goal; and
- 4. May allocate a portion of DSM resources specifically to limited-income customers.

- F. An Affected Utility shall provide an opportunity for all affected utility customer classes to participate in Efficiency Resources with a portion specifically allocated for limited-income customers.
- G. An Affected Utility shall monitor and evaluate each Efficiency Resource to determine whether the it is cost-effective and otherwise meets expectations.
- H. An Affected Utility may recover the costs that it incurs in planning, designing, implementing, and evaluating Efficiency Resource if the Commission approves such cost recovery for the Affected Utility in a rate process.
- I. Staff may request an Affected Utility to perform analyses of specified DSM programs and measures to comply with this Article.

R14-2-2709. Commission Review, Acknowledgement and Approval

- A. Within 120 calendar days following an Affected Utility filing its Energy Implementation Plan under R14-2-2705(A), Staff shall file a report that contains its analysis and conclusions regarding the Energy Implementation Plan.
- B. The Commission may hold a hearing for review and approval of Staff's analysis and conclusions regarding an Affected Utility's Energy Implementation Plan under R14-2-2705(A).
- C. Within 180 calendar days following a load-serving entity filing its IRP under R14-2-2706(A), Staff shall file a report that contains its analysis and conclusions regarding its statewide review and assessments of the load-serving entity's IRP.
- D. Within 60 calendar days following subsection (C), the Commission shall issue an order for the load-serving entities' IRPs which shall include:
 - 1. An order of acknowledgement stating the reasons acknowledgment with or without amendment, if the Commission determines that the IRP, as amended if applicable, complies with the requirements of this Article and that the load-serving entity's IRP is reasonable and in the public interest, based on Good Utility Practice and considering the following factors:
 - a. The total cost of electric energy services;
 - b. The degree to which the factors that affect demand, including demand management, have been taken into account;
 - c. The degree to which supply alternatives, such as self-generation, have been taken into account;

- d. Uncertainty in demand and supply analyses, forecasts, and plans, and whether plans are sufficiently flexible to enable the load-serving entity to respond to unforeseen changes in supply and demand factors;
 - e. The reliability of power supplies, including fuel diversity and non-cost considerations;
 - f. The reliability of the transmission grid;
 - g. The degree to which the load-serving entity considered all relevant resources, risks, and uncertainties;
 - h. The degree to which the load-serving entity's plan for future resources is in the best interest of its customers;
 - i. The best combination of expected costs and associated risks for the load-serving entity and its customers; and
 - j. The degree to which the load-serving entity's resource plan allows for coordinated efforts with other load-serving entities; or
- 2. An order of no acknowledgement stating the reason for no acknowledgement;
 - 3. An order of approval of the load-serving entity's Action Plan under R14-2-2706(G) stating the reason for approval; or
 - 4. An order of no approval of the load-serving entity's Action Plan under R14-2-2706(G) stating the reason for no approval.
- E. The Commission may hold a hearing or workshop regarding a load-serving entity's IRP. If the Commission holds such a hearing or workshop, the Commission may extend the deadline for the Commission to issue an order under subsection (D).
- F. While no particular future ratemaking treatment is implied by or shall be inferred from the Commission's acknowledgement, the Commission shall consider a load-serving entity's filings made under R14-2-2706(A) when the Commission evaluates the performance of the load-serving entity in subsequent rate cases and other proceedings.
- G. A load-serving entity may seek Commission approval of specific resource planning actions.
- H. A load-serving entity may file an amendment to an acknowledged resource plan under A.R.S. § 40-252 if changes in conditions or assumptions necessitate a material change in the load-serving entity's plan before the next resource plan is due to be filed.

R14-2-2710. Resource Procurement

- A. Except as provided in subsection (B), a load-serving entity may use the following procurement methods for the wholesale acquisition of energy, capacity, and physical power hedge transactions:
1. Purchase through a third-party on-line trading system;
 2. Purchase from a third-party independent energy broker;
 3. Purchase from a non-affiliated entity through auction or an RFP process;
 4. Bilateral contract with a non-affiliated entity;
 5. Bilateral contract with an affiliated entity, provided that non-affiliated entities were provided notice and an opportunity to compete against the affiliated entity's proposal before the transaction was executed; and
 6. Any other competitive procurement process approved by the Commission.
- B. A load-serving entity shall use an RFP process as its primary acquisition process for the wholesale acquisition of energy and capacity, unless one of the following exceptions applies:
1. The load-serving entity is experiencing an emergency;
 2. The load-serving entity needs to make an immediate acquisition to maintain system reliability;
 3. The load-serving entity needs to acquire other components of energy procurement, such as fuel, fuel transportation, and transmission projects;
 4. The load-serving entity's planning horizon is two years or less;
 5. The transaction presents the load-serving entity a genuine, unanticipated opportunity to acquire a power supply resource at a clear and significant discount, compared to the cost of acquiring new generating facilities, and will provide unique value to the load-serving entity's customers;
 6. The transaction is necessary for the load-serving entity to satisfy an obligation under the Renewable Energy Standard rules; or
 7. The transaction is necessary for the load-serving entity's demand-side management or demand response programs.
- C. A load-serving entity shall engage an independent monitor, approved by the Commission, to oversee all RFP processes for procurement of new resources.

R14-2-2711. Independent Monitor Selection and Responsibilities

- A. When a load-serving entity contemplates engaging in an RFP process, the load-serving entity shall consult with Staff regarding the identity of companies or consultants that could serve as independent monitor for the RFP process.
- B. After consulting with Staff, a load-serving entity shall create a vendor list of three to five candidates to serve as independent monitor and shall file the vendor list with the Commission to allow interested persons time to review and file objections to the vendor list.
- C. An interested person shall file with the Commission, within 30 days after a vendor list is filed with the Commission, any objection that the interested person may have to a candidate's inclusion on a vendor list.
- D. Within 60 days after a vendor list is filed with the Commission, Staff shall issue a notice identifying each candidate on the vendor list that Staff considers to be qualified to serve as independent monitor for the contemplated RFP process. In making its determination, Staff shall consider the experience of the candidates, the professional reputation of the candidates, and any objections filed by interested persons.
- E. A load-serving entity may retain any of the candidates identified in Staff's notice as an independent monitor for the contemplated RFP process.
- F. A load-serving entity shall file with the Commission a written notice of its retention of an independent monitor.
- G. A load-serving entity is responsible for paying the independent monitor for its services and may charge a reasonable bidder's fee to each bidder in the RFP process to help offset the cost of the independent monitor's services.
- H. Within one week prior to the deadline for submitting bids, a load-serving entity shall provide the independent monitor a copy of any bid proposal prepared by the load-serving entity or entity affiliated with the load-serving entity and of any benchmark or reference cost the load-serving entity has developed for use in evaluating bids. The independent monitor shall take steps to secure the load-serving entity's bid proposal and any benchmark or reference cost so that they are inaccessible to any bidder, the load-serving entity, and any entity affiliated with the load-serving entity.

R14-2-2712. Waivers and Exemptions

- A. The Commission may exempt an Affected Utility from complying with any provision in this Article.

B. An Affected Utility requesting an exemption or waiver of these rules shall submit to the Commission an application that includes, at a minimum:

1. The reasons why the burden of compliance with the Article, or the specific provision in the Article for which exemption is requested, exceeds the potential benefits to customers that would result from the Affected Utility's compliance with the provision or Article;
2. Data supporting the Affected Utility's assertions as to the burden of compliance and the potential benefits to customers that would result from compliance; and
3. The reasons why the public interest would be served by the requested exemption.

R14-2-2713. Cooperatives

- A. Each Cooperative shall employ best reasonable efforts to comply with the applicable provisions of this Article.
- B. Upon Commission approval of a Cooperative's Energy Implementation Plan in accordance with R14-2-2705, its provisions shall substitute for the requirements set forth in these Rules.

R14-2-2714. Commission Enforcement

Nothing herein is intended to limit the actions the Commission may take or the penalties the Commission may impose pursuant to Arizona Revised Statutes, Chapter 2, Article 9. An Affected Utility is entitled to notice and an opportunity to be heard prior to Commission action or imposition of penalties.

R14-2-2715. Cost Recovery and Prudence

- A. An Affected Utility may recover its prudent costs in accordance with the provisions of this Article in a rate process.
- B. If the Commission finds after affording an Affected Utility notice and an opportunity to be heard that the Affected Utility has failed to comply with this Article, the Commission may find that the Affected Utility shall not recover the costs in a rate process.

Appendix B
Summary of Written Comments

Docket No. RU-00000A-18-0284

Individual: Terry Finefrock (April 17, 2019)

Mr. Finefrock is suggesting/requesting that the Commission modernize its Rate Design and Automate the IRP process to promote cost reductions improvements.

Mr. Finefrock provides the following suggestions:

- The current [Integrated Resource Plan (“IRP”)] should be replaced by a Commission managed Computer modeling system to calculate vs. debate the optimal system configuration. During the time of rapid technology change, emphasis should be placed on service contracts vs. capital investments and modernization of the distribution grid. The IRP computer modeling/simulation system would also reduce the very significant IRP administrative costs charged to ratepayers.
- Rate Design should be changed by: i) capping current rates; ii) scheduling bi-annual rate reductions of 8-10 percent until an optimal lowest cost is achieved using developing technology which, in turn, would provide signals to the utility as to the desired profit margins; iii) updating rate of return however they deem appropriate, while optimizing ratepayer value.
- Metropolitan Microgrids should be strongly encouraged.
- Wireless demand response, capable of managing electricity from any source, powered by utility-scale solar facilities eliminate the need for additional vulnerable transmission infrastructure.
- Wholesale generation-transmission markets should be considered.
- A short-term project to promote energy storage should be developed

Sierra Club, Sunrun, Inc., Vote Solar, Western Grid Group, and Western Resource Advocates (collectively the “Joint Stakeholders”) (April 26, 2019)

The Joint Stakeholders request more opportunities to be involved. Furthermore, they request that future workshop agendas and any underlying materials be provided at least two weeks in advance so that parties may meaningfully participate in the discussion.

Petition: Various Consumers (April 30, 2019)

The various consumers support the 50 percent Renewable Energy Standard by 2028.

Individual: Jack S. Tuber (May 9, 2019)

Mr. Tuber suggests Arizona Public Service Company ("APS") invest in 35 percent Energy Efficiency ("EE") and 50 percent renewable energy by 2030.

Individual: Ron and Gail Coronato (May 13, 2019)

Mr. and Mrs. Coronato write in support of Commissioner Olson's proposal and support reasonable, cost effective forms of alternative energy.

Individual: David Wolf (May 13, 2019)

Mr. Wolf supports the renewable energy standard to a requirement of 50 percent renewable energy by 2030. He would like for renewable energy to be explored over clean energy and does not believe that nuclear should be used long term.

Mr. Wolf provides comments to specific modifications to the Energy Rules.

Conservative Alliance for Solar Energy ("CASE") (May 13, 2019)

CASE supports a renewable energy standard of 50 percent renewable solar and wind with battery storage by 2030 and provides comments on potential rule changes.

Individual: Laura Kiholm (May 14, 2019)

Ms. Kiholm writes in support for adopting strong requirements for renewable energy and EE for Arizona.

Similar comments were filed by: *Individuals: Fred Davis (May 13, 2019), Russell Lowes (May 14, 2019), Patsy Stewart (May 15, 2019), Laurie Lautzenheiser (May 15, 2019), and The Western Way (May 16, 2019).*

Individual: Henry M. Goldberg and John M. Cordes (May 16, 2019)

Mr. Cordes and Mr. Goldberg support a 100 percent clean energy source goal by 2050.

They state that renewable energies can now produce energy cheaper than coal plants. They also provide information on global warming and neighboring state's policies. They suggest a new process to be put in place to ensure the maximum use of clean energy when economically effective and environmentally required.

Additional suggestions include:

- They provide information on Xcel Energy (Colorado) and highly competitive bidding for renewable energy as a model for Arizona to use;

- The Commission should require that utilities modify their IRP's to consider maximizing the use of clean energy options for base load and peak load needs;
- Scenarios that the [utilities] should address and comment on retail electricity competition; and
- Recommendations that the Commission adopt an "Independent System Evaluator" ("ISE") to assist the Commission in working with electric utilities to effectively implement the IRP. The ISE would be an objective team of experts with competence to work with electric utilities and the Commission to ensure IRP is done in the most effective way to meet the future needs of the Commission, electric power consumers, and the state of Arizona.

Western Sustainable Agriculture Working Group ("WSAWG") (May 16, 2019)

WSAWG supports a Renewable Energy Standard Tariff ("REST") rules requirement of 50 percent by 2030 with projected milestones. WSAWG provides information on how Photovoltaics benefit agriculture.

Similar comments were filed by: Individual: Karen Contos (May 13, 2019) and Kids Climate Action Network (May 14, 2019).

Conservation for Responsible Stewardship ("CRS") (May 16, 2019)

CRS illustrates that the price of electricity generated by new utility scale solar plants is significantly cheaper than electricity from coal and natural gas generation.

They support a diverse portfolio of generated power and a REST requirement of 50 percent renewable energy by 2030 with a carve out for Distributed Generation ("DG"). They further suggest that without a diverse portfolio Arizona will lose businesses to our more energy efficient neighbors.

CRS would also like for the Commission to implement a stronger IRP process.

Individual: Shannon Jenkins (May 16, 2019)

Ms. Jenkins suggests that utilities should be required to achieve 35 percent EE and 50 percent renewable energy by 2030.

Similar comments were filed by: Individual: Dena Cowan (May 16, 2019) and Arizona Interfaith Power and Light ("AZIPL") (May 16, 2019).

Arizona Public Health Association ("AZPHA") (May 17, 2019)

AZIPHA support maintaining the current framework for the respective standards by increasing the EE Standard to at least 35 percent by 2030 and the Renewable Energy Standard to 50 percent by 2030.

American Council for an Energy-Efficient Economy ("ACEEE") (May 17, 2019)

ACEEE supports increased standards and requirements over goals. ACEEE provides information to support their comments.

Similar comments were filed by: *Physicians for Social Responsibility (May 17, 2019)* and *Ceres Business for Innovative Climate and Energy Policy Network (May 17, 2019)*.

Chispa Arizona ("CHISPA") (May 17, 2019)

CHISPA supports that utilities are required to have a renewable and clean energy goal of at least 50 percent by 2030. They also ask for an increase of the EE standard to 35 percent by 2030.

Similar comments were filed by: *Individuals: Laurel Hardin (May 17, 2019), Pierre N. Tariot (May 17, 2019), Laura J. Jakimovich (May 17, 2019), and Sharon Day (May 17, 2019)*.

The Alliance for Industrial Efficiency (the "Alliance") (May 17, 2019)

The Alliance is in favor of requiring utility companies to invest in EE and fully supports a renewal and extension of Arizona's existing EE Resource Standard.

Individual: Valarie A. Bryant (May 17, 2019)

Ms. Bryant supports increased Renewable Energy and EE Standards.

Vote Solar (May 17, 2019)

Vote Solar supports a standard of 50 percent renewable energy and 100 percent clean energy. They believe Commission should pursue further analysis prior to determining a timeline for those targets.

Vote Solar provides the following information on states in the west:

- Nevada: 50 percent renewable by 2030 and 100 percent clean by 2050
- New Mexico: 50 percent renewable by 2030, 80 percent renewable by 2040, and 100 percent zero-carbon by 2045
- Oregon: 50 percent renewable by 2040
- Washington: 100 percent clean by 2045

- California: 100 percent clean energy by 2045

Vote Solar believes the rules should continue opportunities for DG and Distributed Energy Resources (“DER”) by including a DG carve out. The Company also attached a petition that called for at least 50 percent renewable energy and 100 percent clean energy, an enforced standard, and opportunities for customers to participate.

Navajo nongovernmental community organizations: (“the Community”) (May 17, 2019)

The Community supports creating specific renewable energy requirements and right to establish requirements for tribal clean energy projects.

The Community urges the Commission to push utilities to transition to renewable resources because of health and cost benefits. They want the Commission to require utilities to meet specific targets for clean energy resource development and EE programs.

The Community wants the Commission to require that a percentage of renewable and efficiency capacity be met through tribal clean energy projects. They propose that the Commission require minimums that APS and Tucson Electric Power Company (“TEP”) both be required to secure clean energy capacity on the Navajo Nation that is proportional to their ownership shares in Navajo Generating Station. For APS, that means at least 335 MW of the new resources it brings online should be solar and wind projects developed on tribal lands. For TEP, 180 MW.

National Housing Trust (“NHT”) (May 17, 2019)

NHT provide information on how stricter EE Standards would benefit low-income families.

Western Grid Group (“WGG”) and Western Resource Advocates (“WRS”) (May 20, 2019)

WGG and WRS support the adoption of a mandated renewable energy standard of 50 percent by 2035.

WWG and WRS provide the following statistics on neighboring states: New Mexico and California have adopted renewable energy standards of 50 percent and 60 percent by 2030, respectively, and a 100 percent zero-carbon requirement by 2045. Nevada recently established a 50 percent renewable energy standard by 2030, with a 100 percent zero carbon goal by 2050.

WWG and WRS claims that EE provides an opportunity for customers to manage and lower utility bills and provides further information.

Individual: Robert J. Rossi (May 20, 2019)

Mr. Rossi supports REST to at least 50 percent renewable energy by 2030 and provides comments on the benefits of renewable energy.

Similar comments were filed by: *Individual: Patricia M. Hoyt (May 20, 2019), Various Consumers (May 17, 2019), and Arizona Technology Council (May 20, 2019).*

Petition: Various Consumers (May 20, 2019)

Various Consumers support requiring utilities to have 50 percent renewable energy sources by 2028.

Arizona Department of Environmental Quality ("ADEQ") (May 20, 2019)

ADEQ provides information/statistics on the health impacts and regulatory costs of ozone. This includes changes that were made because of the Clean Air Act. ADEQ indicates that Arizona did not meet the ambient air quality standards for ozone in 2017-2018 and does not expect to this year either.

ADEQ discusses the potential benefits of specific policy areas the Commission is considering including biomass, and electric vehicles.

Complaint: Yavapai County Climate Change Coalition ("YCCC") (May 20, 2019)

YCCC supports the 35 percent EE and 50 percent renewable energy sources by 2030.

Primavera Foundation (May 20, 2019)

Primavera supports EE and demand-side management programs and policies with lower bills. Primavera urges the Commission to continue its EE Standard beyond 2020.

Consumer Reports ("CR") (May 20, 2019)

CR writes to express their support for EE investment and urges the Commission to continue Arizona's EE Resource Standard and increase energy savings on an annual basis.

Similar comments were made by: *Consumer Federation of America ("CFA") (May 20, 2019) and ProgressNow Arizona (May 21, 2019).*

Sierra Club Grand Canyon Chapter ("Sierra Club") (May 21, 2019)

The Sierra Club supports Commissioners Kennedy's proposal to achieve 50 percent renewable energy by 2028 and an EE Standard of 35 percent by 2030.

The Sierra Club also provides facts about other states' progress in renewable energy requirements and how costs of these renewable sources have dropped with time.

Similar comments were made by: *Environment Arizona Research & Policy Center (May 21, 2019), Individuals: James A. Moule (May 21, 2019), and Richard C. Katz (May 22, 2019).*

Wildfire (May 21, 2019)

Wildfire supports the Commission's previously adopted EE Resource Standard and encourages continuing the Standard and increasing the benefits EE provides to Arizona residents.

Tucson Urban League, Inc. (May 21, 2019)

The Tucson Urban League supports higher standards for renewable energy and energy savings. They also want to annual requirements for planning and reporting in place.

Similar comments were made by: *Center for Economic Integrity (May 21, 2019)*

Arizona Technology Council (May 22, 2019)

The Arizona Technology Council supports an increase in the state's REST to up to 50 percent renewable energy by 2030. The rules should allow for flexibility and have specific targets such as 85 percent clean energy by 2050.

Petition: Arizona PIRG Education Fund ("Education Fund") (May 22, 2019)

The education fund advocates for EE Standards to be at least 35 percent by 2030. They also provide information on voter opinions and want to continue to require utilities to be held to EE Standards.

The American Council on Consumer Awareness, Inc. (May 22, 2019)

The American Council on Consumer Awareness supports the EE Standard of requiring utilities to have 35 percent renewable energy by 2030.

Similar comments were made by: *Tucson 2030 District (May 22, 2019)*.

Complaint: Patricia Butler and Thomas Maroun (May 24, 2019)

Mrs. Butler and Mr. Maroun support Renewable Energy Standard of 50 percent by 2028.

Similar complaints were made by: Barbra Coon (May 28, 2019) and Fredrick Wilburn (May 24, 2019).

Southwest Gas Corporation ("SWG") (May 29, 2019)

SWG objects to the elimination of Gas EE Rules from the Energy Rules and suggests that the Gas EE Rules be updated and continued or that gas utilities be consolidated or included in the updated Energy Rules.

SWG provides information on Renewable Natural Gas ("RNG"), a carbon negative fuel, that is in the early stage of development. SWG also comments on other natural gas technologies.

They state that if natural gas is not included in the Energy Rules, that the natural gas utilities will be put at a competitive disadvantage.

SWG advocates for equal representation of electric utilities and gas utilities within the rules and suggests language to fulfill their complaint and suggest that natural gas take up a certain percent of utilities renewable resources:

SWG supports a goal similar to its proposal, included in Docket No. G-01551A-19-0055, of no more than one percent of its forecasted retail sales portfolio from RNG by 2025, two percent by 2030, and three percent by portfolio from RNG by 2025, two percent by 2030, and three percent by 2035.

Finally, SWG comments on cost recovery referring to the April 29th, 2019 workshop. SWG could include cost recovery as part of a general rate case.

Individual: William C. Elliott (May 29, 2019)

Mr. Elliott supports requiring utilities to support stronger Renewable Energy Standards.

Similar comments were filed by: *Individuals: Shelly Gordon-Gray (May 29, 2019), Korey Hjelmmeir (May 29, 2019), Chressie Jo Sylvester (May 29, 2019), and Arizona Faith Network (May 29, 2019).*

Energy Storage Association ("ESA") (May 29, 2019)

ESA recommends including an explicit energy storage goal among with a clean energy goal and clean peak standard. An energy storage target could be incorporated into the IRP rules to better align with the Commission's policy objectives and provide the utility with flexibility.

ESA agrees with Commissioner's proposal of 3,000 megawatt by 2030 and recommends to following definitions:

"Energy Storage System" means a commercially available technology that is capable of retaining energy, storing the energy for a period of time and delivering the energy at a later time. including. without limitation. by chemical. thermal or mechanical means.

"Energy Storage Goal" means an amount of eligible energy storage systems (megawatts) that each Affected Utility must procure of the statewide storage target of 3.000 MW by 2030 based on its share of peak load as of January 1. 2020.

ESA also recommends that the energy storage target become the third requirement after the renewable energy goal and clean peak goal and offers language changes to the Energy Implementation plan section of the rules.

ESA supports the waver system and further recommends implementing policies to reduce costs and meet peak demand to complement the aggressive clean energy goal. ESA is supportive of the Clean Peak Goal provides language for a baseline minimum definition to use in its written comments.

Finally, ESA recommends a pathway for eligibility for standalone storage where it can be “virtually paired” with a renewable resource. Under this concept, standalone energy storage systems would be able to demonstrate the acquisition of a renewable energy credit from an eligible renewable energy resource for every hour it would like to receive a clean peak credit.

Individual: Sandy Whitley (May 29, 2019)

Ms. Whitley supports the renewable energy standard of 50 percent by 2028

Similar comments were filed by: *Petition-Various Consumers (May 29, 2019)* and *Individual: James A Moule (May 29, 2019)*.

Interwest Energy Alliance (“Interwest”) (May 29, 2019)

Interwest supports 40 percent renewables by 2035 and urges Staff to maintain existing REST rule language which makes renewable energy adoption a requirement.

Interwest urges Staff to restore interim procurement requirements that are found in the current REST and suggests the following pattern: 20 percent by 2020, 27 percent by 2025, 33 percent by 2030, 40 percent by 2035.

The Company does not believe that Energy Storage Systems are renewable resources and recommends “Energy Storage System” be removed from “Renewable Energy Resources” and instead establish energy storage as a separately-defined technology. They also suggests that Staff’s proposed language raises concerns of double counting for renewable energy if energy storage resources are counted as renewable energy resources.

Interwest agrees that “Clean Peak” and “Renewable Energy” should be separate programs with separate definitions and targets. They believe clean peak resources should be required to provide essential reliability services.

Interwest recommends an edited definition of “Clean Energy Resource” to include any resource which produces zero net greenhouse gas emissions and can provide essential reliability services to meet peak requirements, including: the ability to follow Automatic Generator Control (“AGC”) signals for frequency regulation (up and down); active and reactive power controls, primary frequency control, ramp rate control; voltage regulation, and load following capabilities.

Interwest believes resource planning and procurement rules should be strengthened. In addition, Interwest believes that companies should be required to amend and resubmit their resource plans if they are rejected.

Western Resource Advocates, Western Grid Group, Vote Solar and Sierra Club, Grand Canyon Chapter ("Joint Stakeholders") (May 29, 2019)

The Joint Stakeholders believe that requirements for renewable energy, not goals, are necessary for driving cost-effective clean energy investments in Arizona and to ensure the electric system is affordable for vulnerable populations and all consumers.

The Joint Stakeholders oppose merging the REST and Electric EE rules with the Resource Planning and Procurement rules because they serve different purposes.

APS (May 29, 2019)

APS suggests the draft rules consider flexibility, customer affordability, and mechanisms for timely recovery.

APS supports goals rather than mandates and the inclusion of a wide variety of clean energy resources, specifically nuclear.

APS recommends that the draft rules avoid fixed carve-outs.

APS notes that the Commission's existing renewable and EE rules were very successful in achieving the desired outcomes through a combination of base rate and adjustor mechanism cost recovery.

APS requests that future workshop agendas and any underlying materials be provided at least two weeks in advance so that parties may meaningfully participate in the discussion.

Sierra Club, Grand Canyon Chapter ("Sierra Club" or "Company") (May 29, 2019)

The Sierra Club supports a comprehensive IRP, offers specific details of changes, and provides examples of how other states have handled similar situations.

The Company suggests the IRP rules should include a statement of purpose to insure the utilities' plans align with the Commission's goals.

The Company suggests the new rules allow for significant stakeholder involvement and have access to pertinent data. The Sierra Club wants to require the utility meet with stakeholders at least four times in the pre-filing planning process and should establish a minimum number of stakeholder meetings.

The Company recommends adding the following details to the following filing requirement sections:

- *Planning Environment:* The IRP should describe the various laws and regulations that might affect the planning decision.

- *Existing Resources Assessments:* The utility should further provide the contract for all supply-side resources and the details of their demand-side resources.
- *Needs Assessments:* The purpose of the needs assessment is to establish the timing and scope of potential impending utility shortfalls relative to customer demand.
- *New Resource Options:* i) The utility should be required to conduct and provide a proactive analysis identifying all technically reasonable sources of new energy, capacity, or other critical grid services, including demand-side resources; and ii) This section should also require the utility to evaluate all potential new sources of energy and capacity without regard to ownership or contractual structures.
- *Assumptions and Forecasts:* i) The Rules should further require utilities to describe the range of forecasts used or excluded, and utilities should be required to consider forecasts based on inputs suggested by stakeholders; ii) The utility should use an appropriate model, justify its decision, and ensure that stakeholders understand the limitations of the model selection or framework; and iii) The Sierra Club recommends additional specific comments in this section for clarification.
- *Resource Plan Development:* i) The utility should develop a selection of optimized alternative resource plans using various assumptions, forecasts, and resource portfolios, which have incorporated stakeholder input; ii) The utility should then select a preferred resource plan that satisfies the utility's need forecast through a balanced integration of both supply-and demand-side resources; iii) The Sierra Club provides additional details for this section.
- *Actions Plan:* i) Sierra Club recommends an expansion of the "action plan" required under section R14-2-"704(H); ii) The action plan should cover a five-year period from the submission date of the IRP; iii) The action plan should specifically describe the actions the utility must take within the five years following the implementation of the IRP to meet its preferred resource plan; and iv) The action plan should not include specific technologies.
- *Prior Action Plan Implantation Status Update:* Following the first IRP submission, subsequent IRPs should include an update describing the progress of each action item submitted with the most recent Action Plan.
- *Avoided Cost Calculation:* This calculation should be subject to Commission and stakeholder review and comment.

Included in its comments, the Sierra Club attached versions of various state and territory IRP rules including: Puerto Rico, Oregon, West Arkansas, Michigan, Indiana, Minnesota, and West Colorado. The Sierra Club also attached Colorado's recently updated electric rules.

TEP and UNS Electric, Inc. ("UNSE") (Collectively the "Companies") (May 29, 2019)

The Companies are no longer satisfied to gauge progress of renewable portfolios on kilowatts, but rather by focusing on reducing carbon dioxide emissions.

The Companies recommend a state-wide IRP approach, along with waiver provision in the draft Energy Rules.

TEP will be able to cost effectively reach the energy goal of 40 percent by 2035, but UNSE will have to increase customer rates due to its smaller resource portfolio.

The Companies recommend against specific technology carve-outs as this indicates that the Commission is picking "winners and losers".

The Companies suggest modifying the Clean Peak Goal to reflect a more meaningful "Energy Storage Peak Goal" and state that the "use of clean energy resources should be optimized across all hours of the day and night rather than targeting a limited number of hours during the summer peaks".

In the revised Energy Rules, include incentives for any behind-the-meter technologies. The Companies recommend that incentives can be funded through surcharges rather than a rate case.

Concerning Biomass, the Companies suggest providing utilities with flexibility to immediately defer the associated costs until they can be recovered in base rates or through another mechanism.

The Companies request the Commission, if [Demand-side Management] program costs are to be recovered in a rate case, establish a transition period to recover all costs incurred up to the transition to base rates.

TEP and UNS attached a redlined version of the rules to their comments.

Individual: Caroline Davies (May 30, 2019)

Ms. Davies supports stronger REST rules.

Sunrun (May 30, 2019)

Sunrun suggests evolving the DG Carve-Out by updating to a concept that maintains the advantage of encouraging and preserving a space for competition and customer investment in their own DER while focusing on maximizing the broad benefits of distributed solar paired with battery storage.

Sunrun recommends the updated REST Rules include provisions requiring utilities to work with stakeholders to propose and implement a form of a Bring Your Own Device ("BYOD") tariff and should include a goal for the targeted penetration of these devices against which the success of the tariff can be judged.

Sunrun explains BOYD and the role it would take through DER in the REST rules by including definitions and a section which outlines the basic plan.

Individual: Nona Siegel (May 31, 2019)

Ms. Siegel supports stronger REST rules and does not agree that nuclear energy is “clean”.

Arizona Free Enterprise Club (“Club”) (May 31, 2019)

The Club supports Commissioner Olson’s proposal and opposes stronger REST rules due to probable higher utility rates for homeowners.